

U.S. Patent Application Serial No. **10/574,832**
Response filed August 17, 2009
Reply to OA dated April 15, 2009

REMARKS

Claims 1-27 are pending in this application. Claims 1-7, 19 and 22 are under consideration, and claims 8-18, 20-21 and 23-27 are withdrawn. Claim 22 is hereby amended. No new matter has been added.

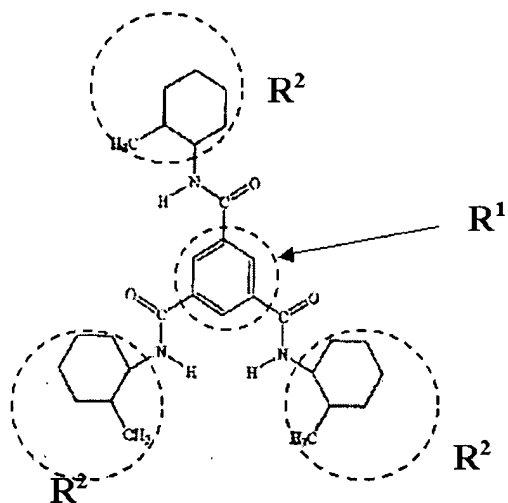
Claim 22 stands rejected under 35 USC 112, second paragraph, as indefinite. Further, claim 22 stands rejected under 35 USC 101 as directed to a non-statutory subject matter. In particular, the Examiner stated that claim 22 recites a use claim, or a process without a step. Applicants hereby amend claim 22 to recite a method of using a mixture of at least two amide-based compounds comprising a step of incorporating the mixture to a resin. Because elected Group I is drawn to a mixture of at least two amide-based compounds, and the process for producing and the method of using the same, claim 22 as amended reads on the elected species. Since claim 1 as amended is directed to a proper method claim and is not indefinite, this rejection should be withdrawn.

Claims 1-7 stand rejected under 35 USC 103(a) as obvious over Schmidt (US 7,235,191). In particular, the Examiner alleged that "Schmidt et al teach structurally similar amide based compounds, see for example column 24, example A. The difference between the reference and herein claimed subject matter is that the reference does not specifically spell out stereoisomers" (Action, p. 4, ll. 14). The Examiner appears to have misunderstood the structure of Schmidt's nucleating agent.

U.S. Patent Application Serial No. 10/574,832
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Claim 1 recites a mixture comprising at least two amide-based compounds represented by General Formula, $R^1-(CONHR^2)_a$, wherein R^1 is an *aliphatic* polycarboxylic acid residue. By definition, an aliphatic residue is not an aromatic residue.

On the other hand, Schmidt's nucleating agent is a trimesic acid derivative, or a benzene derivative containing three carboxylic acid groups (Schmidt, col. 2, ll. 40-45). Thus, as illustrated in marked Formula (i) of Schmidt reproduced below, for example, the R^1 residue of Schmidt's nucleating agent is aromatic—not aliphatic as claimed.



Accordingly, Schmidt's nucleating agent relates to a complete different group of compounds from the amide compounds of the claimed mixture, and Schmidt fails to disclose or suggest the recited mixture. Accordingly, applicants respectfully request the Examiner to withdraw this obviousness rejection.

U.S. Patent Application Serial No. **10/574,832**
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Further, the Examiner alleged that the claimed ratio of cis- and trans-2-alkylcylcohexylamine residue does not distinguish the claimed invention from the nucleating agent of Schmidt, alleging that a stereoisomer is unpatentable over its racemate. Applicants respectfully disagree. Claim 1 is directed to a mixture including amide-based compounds having a specific ratio of trans-2-alkylcylcohexylamine residues—not simply a stereoisomer over its racemate. Further, as explained in the specification, the claimed mixture having the recited molar trans residue ratio imparts excellent physical properties to a polyolefin resin, including temperature stability, alkali resistance, transparency, crystallization temperature, and flexural modulus (Spec, p. 65, l. 14- p. 66, l. 18; Tables 1 and 2). Since Schmidt does not disclose the recited amide-based compound with the recited R¹ residue, Schmidt does not disclose a mixture of at least two of such amide based compounds—much less such a mixture in which the trans-2-alkylcyclohexylamine residues are present in the recited molar ratio. Thus, the recited mixture of claim 1 would not have been obvious to those skilled in the art in view of Schmidt, and this rejection should be withdrawn for this additional reason.

Claim 19 stands rejected under 35 USC 103(a) as obvious over Schmidt. Yoshimura is cited to show the state of the art. In particular, the Examiner relied on Schmidt to disclose a mixture of at least two amide-based compounds having General Formula, R¹-(CONHR²)_a, wherein R¹ is an aliphatic polycarboxylic acid residue, and in which the content of the trans-2-alkylcyclohexylamine in the mixture is at least 70% but less than 100% as claimed. As explained above, Schmidt fails to disclose or suggest the recited mixture. Accordingly, this rejection should be withdrawn.

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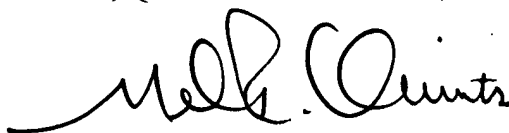
In view of the above amendments and remarks, applicants respectfully request an early action allowing claims 1-7, 19 and 22 as amended. The Examiner is hereby authorized to cancel the non-elected claims should the rest of the claims in the application be found allowable. Further, the Examiner is invited to telephone the undersigned attorney at the number provided below if it is believed that a telephone conference may expedite the prosecution of this application.

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In the event that this paper is not timely filed, applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosures: Petition for Extension of Time